



Carmel River Steelhead Association

Advocating for Steelhead Since 1974

Fish Tales

Monthly Newsletter

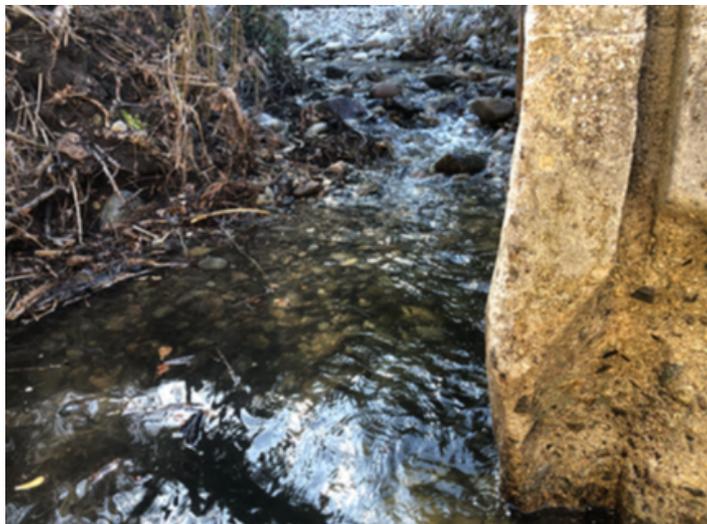


MARCH 2021

CRSA Membership

UPCOMING EVENT | 4th CA WILDLIFE DAY

Find more details at end of newsletter.



Steve Park took the above photos from a recent volunteer clean up project on Harkin's Bar on Finch Creek, Carmel Valley.

PRESIDENT'S MESSAGE

Written By Steve Park

Went out for a creek clean up the other day. The Harkin's summer dam on Finch Creek to be exact. It was clogged up from the recent "Atmospheric River" that came through back in January. This seasonal dam is not used anymore so the damming slot is open year round. Back in the day the water it backed up was used to water potatoes in a near by patch. Definitely used as a swimming hole. But now it catches debris flows with ease which shut down fish passage altogether.

I had not seen the Finch since the summer rescues of 2020. The first impression I had as we entered the creek was what a perfect tributary for spawning Carmel River steelhead. I mean real, gin-clear water with a pebbled bottom slipping through the confines of a tree lined canyon. Just add water and they will come.

Every time I'm in these Carmel River tribs I am reminded of the diversity of the river's watershed and how these "creeks" are just right for steelhead spawning. When a heavy rain season extends into spring these waterways will allow adult steelhead access to spawning grounds deep into the watershed reaches. That type of winter rain provides for potential months of steelhead being in the river system giving them an opportunity to come in and still have time to get out. Just add the water and they will continue to exist.

So, that's what it comes to. Given an uninterrupted river system fish can thrive. The Carmel River system a hundred years ago was only somewhat interrupted and a significant number of winter run Carmel River Steelhead existed. They really did. In the past hundred years Mother Nature has played her cards weather wise. Droughts would limit river flows and fish would not get in the river. Now add the water diversion of the river to more predicted droughts and the fish in the system could soon disappear altogether.

Speaking of disappearing, can you believe trains waited days for buffalo nerds to stop crossing the track? Well, that was soon ended- forever. Kind of the same for the coastal river of California as their lives are diverted away forever.

It reminds me of why conservationists work like they do to save what's

left. When humans no longer care about losing the connective species of life, sea run trout in this case, then volunteers grass roots groups like CRSA step up to help the steelhead and inform the public of their plight and that of that river.



Recently, I had the pleasure of watching a fair sized Carmel River trout (possibly a young adult steelhead) work a riffle in front of our summer cabin. The river riffle had a motion that the trout seemed to duplicate so as to more efficiently feed in the river's current. I would stop by every couple of hours and have a Zen session with the river and its fish. I wondered why it had been so long since I saw a fish like this in this perfect setting. I thought about the buffalo.



Sleep Hollow Rearing Facility, Carmel Valley.

The Conservation Report

Thoughts and Opinions by Brian LeNeve

Is the Sleepy Hollow Steelhead Rearing Facility mitigating as

required for the river being pumped dry?

In 1990 the Monterey Peninsula Water Management District (District) issued an Environmental Impact Report that required mitigation for the significant loss of steelhead that results from the over-pumping of the Carmel River. As a result, the District created a 5-Year Mitigation Plan that has been reaffirmed every year since 1995. That mitigation plan required 5 tasks, four are still required today. Those tasks are:

- 1: *Expand program to capture emigrating smolts in spring.*
- 2: *Prevent stranding of early fall and winter migrants.*
- 3: *Rescue juvenile steelhead downstream of Robles Del Rio in summer.*
- 4: *Experimental smolt transport program at Los Padres Dam.*

To determine if the Sleepy Hollow Steelhead Rearing Facility is in fact mitigating for the over-pumping of the Carmel River I am going to concentrate on project #3: *Rescue juvenile steelhead downstream of Robles Del Rio in summer*, which is the most significant of the four tasks.

The original project requirement for mitigation was to rescue from the “Narrows” (Scarlet Road) for 1.8 miles upstream and rear the fish in a facility near Sleepy Hollow. The actual wording was;
“...the District would construct a facility to hold and rear wild juvenile steelhead below San Clemente Dam, near the Sleepy Hollow Weir. The preliminary design consists of several holding pools and an artificial stream channel. The facility could hold and rear a maximum of 64,000 fish to a weight of 13 grams, equivalent to the size of fish reared under natural conditions in the Carmel River. The fish would be allowed to naturally emigrate out of the holding facility if habitat is available in the river.” The Final Mitigation Plan referenced the Draft Mitigation Plan and that plan stated “based on D.W. Kelley & Associates 1982 measurements of rearing habitat and juvenile steelhead populations in this reach there will be a need to provide enough natural or manmade habitat for 25,000 to 80,000 juvenile steelhead, depending on how much of the rearing habitat below Robles del Rio is lost.”

This is the reason for the 64,000 fish facility and what the Mitigation Plan needed to accomplish. 25,000 to 80,000 fish in 1.8 miles equals 13,000 to 44,444 fish per mile and that estimate is what I will use in my analysis. This is what the District stated was required as mitigation to offset significant harm to steelhead. Maintaining 13,000 to 44,444 juvenile steelhead per mile is what a successful Mitigation Plan should accomplish.

That was in 1990, but what about now? Things have changed since 1990

when the 5-Year Mitigation Plan was implemented. Now the District states CEQA requires them to rescue all of the mainstem that dries. According to the District's Mitigation Annual Reports, for the 8 years they actually report miles rescued, they averaged 6.32 miles of river rescued. Using the District's original estimate of fish in the river from above, (13,000 to 44,444 fish per mile) that would amount to between 82,160 and 280,886 juvenile steelhead affected by the drying main stem of the river.

To further complicate matters now the District says CEQA requires them to rescue the parts of the tributaries that are in their boundaries which would add approximately another 2 miles or an additional 26,000 to 88,888 juvenile fish affected by the drying of the river. Some people will argue that the tributaries will not have as many fish as the mainstem but I disagree based on the fish are rescued right after they are spawned which has the highest concentration of fish. This brings the total juvenile steelhead affected by 8 miles of drying river to between 108,160 and 369,774 fish needed to be mitigated for under their original plan.

Another significant change is that when the Facility was started, steelhead were not a federally threatened species and now they are. This now requires the District to receive and maintain a "Rescue and Rearing Management Plan" (RRMP) from National Marine Fisheries Service (NMFS). I am not sure how the NMFS permit works with the 5-year Mitigation Plan but from what I can read it reinforces what I will go over in the rest of this article.

There are four points in the RRMP that I will mention:

- 1: The District is allowed to rescue both the main stem and tributaries but the RRMP does not differentiate between fish rescue in either location.
- 2: The RRMP states "Juvenile steelhead are transported from the field to the Facility whenever possible, rather than being released to perennial habitat upriver."
- 3: "The maximum capacity of the Facility is 51,585 steelhead."
- 4: The RRMP requires fish released from the Facility to be returned to the general area they were rescued from after the river has been rewetted for 2 to 4 weeks.

With all of the above in mind, is the Facility actually mitigating for the loss of steelhead?

What size Facility is needed to mitigate for 8 miles of river from which steelhead are the rescued now? ...In my opinion, if CEQA requires the District to rescue all of the river and the tributaries in their boundaries that dry, they must mitigate for all of the fish produced in those miles. (Remember the RRMP states "Juvenile steelhead are transported

from the field to the Facility whenever possible, rather than being released to perennial habitat upriver.” (It does not differentiate between river and tributary fish.)

Earlier we determined that to mitigate for steelhead lost in 8 miles of dewatered river, the Facility would need to mitigate for between 108,160 and 369,774 fish. The original 5-year Mitigation Plan requirement was for a 64,000 fish rearing facility, or 80% of the original high estimated number of fish in the 1.8 miles. Using that same ratio now the facility must now mitigate for 80% of 369,774 or have a facility capable of rearing 295,819 fish. To fully mitigate for 8 miles of lost steelhead habitat, the Facility would need to be 4.5 times the size it is now. The existing Facility is not large enough to mitigate as required.

How many of the fish rescued would the Facility need to release to mitigate for what could live naturally if the river did not dry? ...This would be one way of determining if the facility is mitigating for lost fish.

In an article by C.G. Schultze and M.J. Lough “Survival Rates of Fry Released in the Headwaters of the Suskwa and Zymoets Rivers -A Preliminary Assessment-” showed that 18% of fry released lived to yearlings. Considering the fish released in this study were hatchery fish and most people feel hatchery fish do not survive as well as wild fish, we could argue that 18% is low.

In another article by Philip Thomas Sandstrom et al “Low river survival of juvenile steelhead in the Sacramento River watershed” showed that the average survivability through the Sacramento River to the ocean was between 5.6% and 3.6%. Considering the length of the Sacramento River and the study was from fry to ocean, the percentage listed should be considered lower than for a short river and from fry to fall juveniles. Based on the two articles I am going to use a low figure of 8% needing to survive for the period our river is dry.

If the Facility only had to mitigate for the 1.8 miles or 64,000 fish at 8% that would be 5,120 fish needed to be released from the Facility per year. If MPWMD must mitigate for 8 miles or 295,819 fish they would have to release 23,665 fish per year. The best year for releases was 14,721 fish and the average of the last 16 years is 4,268 fish. The Facility has not even averaged enough releases to compensate for 1.8 miles let alone 8 miles. The Facility has not in their best year released enough fish to compensate for 8 miles of river. Based on the number of fish that could survive the period the river is dry the Facility has not mitigated for the loss of steelhead due to drying.

How many fish could the drying parts of the Carmel actually produce and therefore need to be mitigated for? ... This is yet another way to determine if the Facility is mitigating for lost steelhead. The District has always said they only need to release fish in the numbers that would survive naturally in the river although that is not what the original plan said. The original statement was *“The facility could hold and rear a maximum of 64,000 fish to a weight of 13 grams, equivalent to the size of fish reared under natural conditions in the Carmel River.”* In other words, the requirement was for size releases (which they have done) not number releases and considering we are trying to recover a species, I believe the Facility should release as many fish as possible. Regardless, the Facility must mitigate (rescue and rear) for the actual number of fish that could be in the parts of the river that dry.

There is no way of knowing how many fish are in any section of river that dries. While the District staff does an adequate job of rescues, in my experience when the river starts drying it goes so fast teams cannot keep up. Last year we were able to rescue two sections of Cachagua Creek three times and in both cases, we rescued more fish the third time than we did the first time and I am positive we still did not get all the fish. The reason for more fish on the third pass is that we and the District are rescuing fish that are between 1” to 2” and the electroshocker does not affect very small fish. We will see 30 small fish in an area and only capture 5 or 6. Based on my experience, the number of fish rescued does not equal the number of fish in a section of river, so how do we determine how many fish a river could produce?

To try to determine how many fish could actually be in the part of river that dries, the best metric we can use is the fall juvenile count for a normal river (and again there is no such thing as a normal river) and the fall juvenile count for the Carmel. This would be the number that survived over the summer or during the time rescued fish would be in the Facility. It would be the number of fish the District would have to rescue just to maintain the status quo.

I was told by the past Senior Fisheries Biologist for the District that a normal river in the fall should produce at least 1.5 fish per foot or 7,812 fish per mile. (In a few years there have been sections of the Carmel that produced over 2 fish per foot.) Therefore 8 miles of normal river should produce 62,496 fall juveniles. If we use the same 8% survivability, then there could be 781,200 fish in need of rescuing and the district is only averaging 18,553 fish rescued per year. The Facility has not mitigated for what is needed to equal a normal river.

The Carmel is not a normal river and the fall juvenile count is around 0.45

fish per foot or 2,376 fish per mile. Eight miles would be 19,008 fall juveniles or 237,600 fish in need of rescuing. If we only used 5% as a standard of what could survive, then we would start with 76,032 fish needed to be rescued. Remember the average number of fish rescued by the District is 18,553. All of this is even sadder when in 1994 MPWMD states that CRSA released 186,882 juveniles between 1991 and 1992 from the Captive Broodstock program. The Facility has not mitigated for what could be in the river.

Compare the original estimate of 25,000 to 44,444 fish in 1.8 miles to the possible 4,277 fish in 1.8 miles now and we must conclude: The mitigation program has not performed as planned.

Is the Facility releasing the fish when required? ...Remember the original statement regarding releases: “*The fish would be allowed to naturally emigrate out of the holding facility if habitat is available in the river.*” The idea here is fish are rescued from a section of river and should be released back into that section of river after it is running again and after the food source has had a chance to develop again. I have been told it takes 3 weeks for the food supply to develop again once the river starts to run again (remember the RRMP requirement on fish releases is 2 to 4 weeks). If fish are released before the dry sections of river start running again, they are placed in a river that already has fish in it and in effect you are rescuing and relocating not rescuing and mitigating. If they are placed in a river that has started to run again but not developed a food source, you are starving the fish for a period of time and I suspect requiring a longer time to develop adequate feed.

Looking at the District’s Mitigation Annual Reports from 2005-2006 forward, or 16 years, (years when enough information was available) in 5 of the years no fish were stocked in the Facility. Of the other 11 years, I compared release dates to lagoon breaching dates and in only 2 years did the river run three weeks before the steelhead were released from the Facility. Based on my findings, the Facility has released fish only 18% of the time required for mitigation.

Has the Facility actually mitigated for the steelhead rescued?...I believe that rescuing and relocating is not mitigation. CDFW has stated that very same thing and the RRMP states fish usually should not be just rescued and relocated, so if the fish are not stocked in the Facility then they have not been mitigated for, they are just rescued and relocated. While it is important to rescue and at least relocate fish rather than let them die, and that is a form of mitigation, it is not what is required by the RRMP, not what is required by the 5-Year Mitigation Plan and not what is required to recover a species.

Once again looking at the District's Mitigation Annual Reports since 1996-1997 to 2020-2021 there are 20 years that have enough information to see if fish were reared in the Facility. Of those 20 years, five times or 25% of the time the District did not even stock any fish in the Facility and all fish were rescued and relocated which is not mitigation.

Going further and looking at the number of fish rescued and compared to the number of fish stocked in the Facility, in only 7 of the 20 years were most of the fish rescued stocked in the Facility and never was the Facility stocked to the maximum of 64,000 fish or the new amount of 51,585 fish. In 65% of the years some or all fish were relocated rather than reared, and remember rescue and relocating is not mitigation. In the 18 years with good records, the District rescued 352,480 fish and only stocked 200,221 (57%) in the facility. To make matters worse in those 18 years CRSA helped in rescues on the main river and rescued 72,326 fish. When we add the 72,326 CRSA fish to the 352,480 District fish we have a total of 424,806 fish rescued and 200,221 stocked for a rate of 47% being stocked in the Facility and this does not include the 128,564 fish CRSA rescued on the tributaries. The Facility is not actually mitigating for fish rescued.

Any way I can look at it the mitigations required by CEQA and by State Water Resources Control Board Water Order 1995-10 has not been met.

UPCOMING EVENT!

To register or view a detailed schedule visit www.californiawildlife.net.

Registration is **FREE!**

Photo credit: Luciane Coletti

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Photo credit: DMT Imaging



Presented by the Carmel River Watershed Conservancy
and Monterey Peninsula Regional Park District

California Wildlife Day Celebration

FREE VIRTUAL EVENT

Saturday, March 20 and Sunday, March 21
10am-3pm

- Meet local biologists, ecologists, and scientists
- Take part in nature journaling, bilingual poetry and interactive activities
- View student art, science and poetry

The California State Legislature proclaims the Spring Equinox of every year as California Wildlife Day.

For more information or to register,
visit www.californiawild.net

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CRSA Membership

Carmel River Steelhead Association 2020 Board Members

CRSA Officers

President: Steve Park
831-601-8649
stevepark@razzolink.com

CRSA Board of Directors

Robert Stoddard
541-954-9477
rhstoddard@gmail.com

Vice President: Frank Emerson
O: 831-655-3626
M:831-277-0544
frank.t.emerson@gmail.com

Treasurer: Brian LeNeve
831-624-8497
brian@brianleneve.com

Secretary: James C. Jeffery III
831-659-0804
jim@jamescjeffery.co

Conservation Chair:
Brian LeNeve
831-624-8497
bjleneve@att.net

Newsletter Editor:
Hallie Heath

Web Master:
Julie Dalton
newsletter@carmelsteelhead.org

Tom Pelikan
831-601-8270
tbpelikan@comcast.net

Hallie Heath
hcheath487@gmail.com

Luke Coletti
ljc@groknet.net

Erik Scarr
erikscarr3@gmail.com

Jaime Eltit
jeltit7@gmail.com

Miranda A. Taylor
209-202-8720
mat755@humboldt.edu



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Our mailing address is:

Carmel River Steelhead Association
P.O. Box 1183
Monterey, CA 93942

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